

Identifying ‘Fire-Adapted Communities’: A Framework of Adaptive Capacity

Soren Newman, Matt Carroll and Travis Paveglio
Department of Natural Resource Sciences
Washington State University
and
Pam Jakes
Northern Research Station
U.S. Forest Service

This presentation reports local adaptations that have emerged in response to fire risk

1. Existing adaptive capacity framework
2. Focus group results in Lee County, FL
3. Preliminary conclusions



Focus groups fit into larger research agenda



- Understand local structures & processes that lead to more 'fire adapted' human communities



- WUI-wide assessments of strengths and weaknesses of individual settlement areas

Theories that guide our framework

Interactional Approach

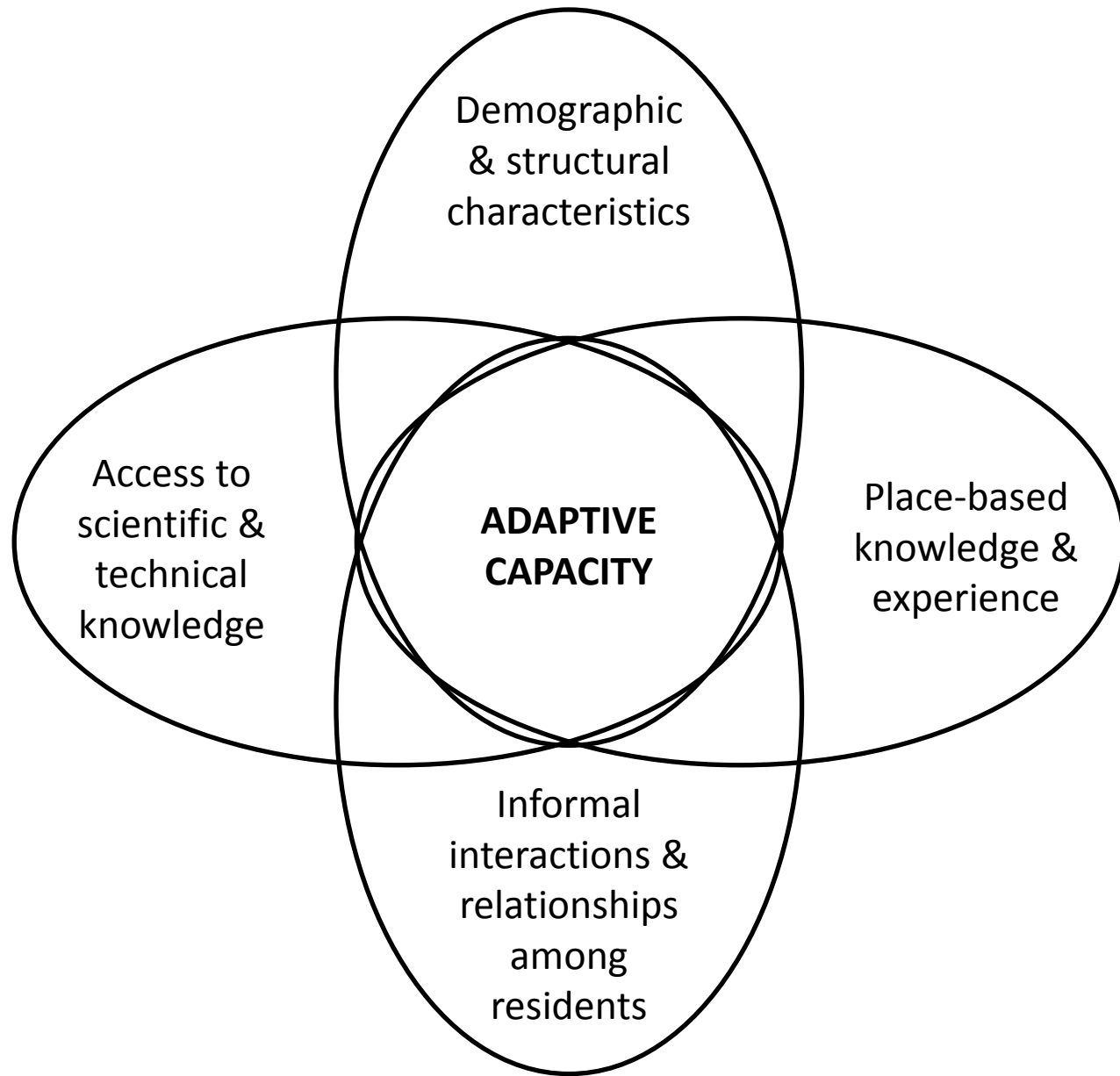
- Wilkinson
- Community Field

Structuration

- Giddens
- Structure enables & constrains agency

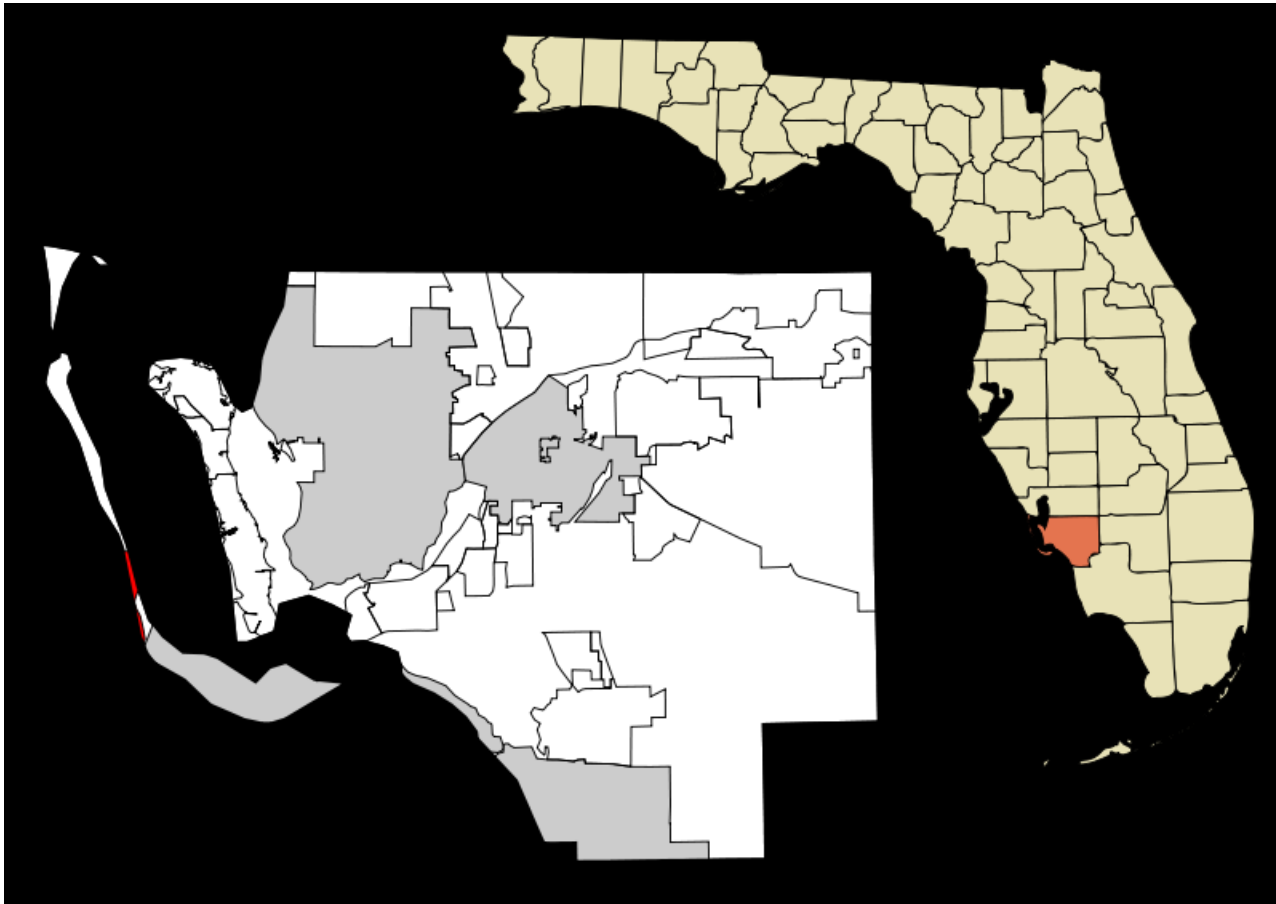


Elements of community adaptive capacity



(Paveglio et al. 2009)

Two focus groups with local emergency professionals and community leaders



Lee County, Florida (Incorporated areas in grey)

Research Questions

- What are the social characteristics & conditions that promote the ability to deal with wildfire locally?
- What local characteristics distinguish highly capable localities from the more 'problematic' areas in Lee County?

In Florida, adaptation to wildfire risk is taking place in the context of:

- Specific land development patterns
- Subsequent responses to the financial crisis



Lee County Development History: “the newly wed & nearly dead”

- Settlement types
 - Urban development
 - Gated communities
 - Pre-platted developments
 - Rural/agricultural to NE



Aerial view of Lehigh Acres, FL

‘Land Scam’ Developments

“...we’ve had two large land scam developments occur in the 50s and 60s...basically they chipped up some rock and poured some tar on it and put roads and a grid in with no infrastructure and all the trees remained. And now we have houses dotting into that [fire-dependent plant] community, which is probably our most problematic [human] community in terms of wildfire perspective.”

The current economic context contributes to wildfire risk:

... parcels were sold all over the world to people...But when the housing market started to go crazy, people who wouldn't think to buy property out in Lehigh were buying property because they felt that this was the last place to buy cheap property...and all of a sudden it collapsed...

National economic crisis has played out in some interesting ways in Florida



Housing Unit Vacancy Rates	
Year	Lee County
1990	25.9%
2000	23.2%
2009	38.5%

Source: Demographics Now, Housing Units Summary Report

Out of the 365,447 total houses in Lee County,
1 in 159 in foreclosure in March 2011

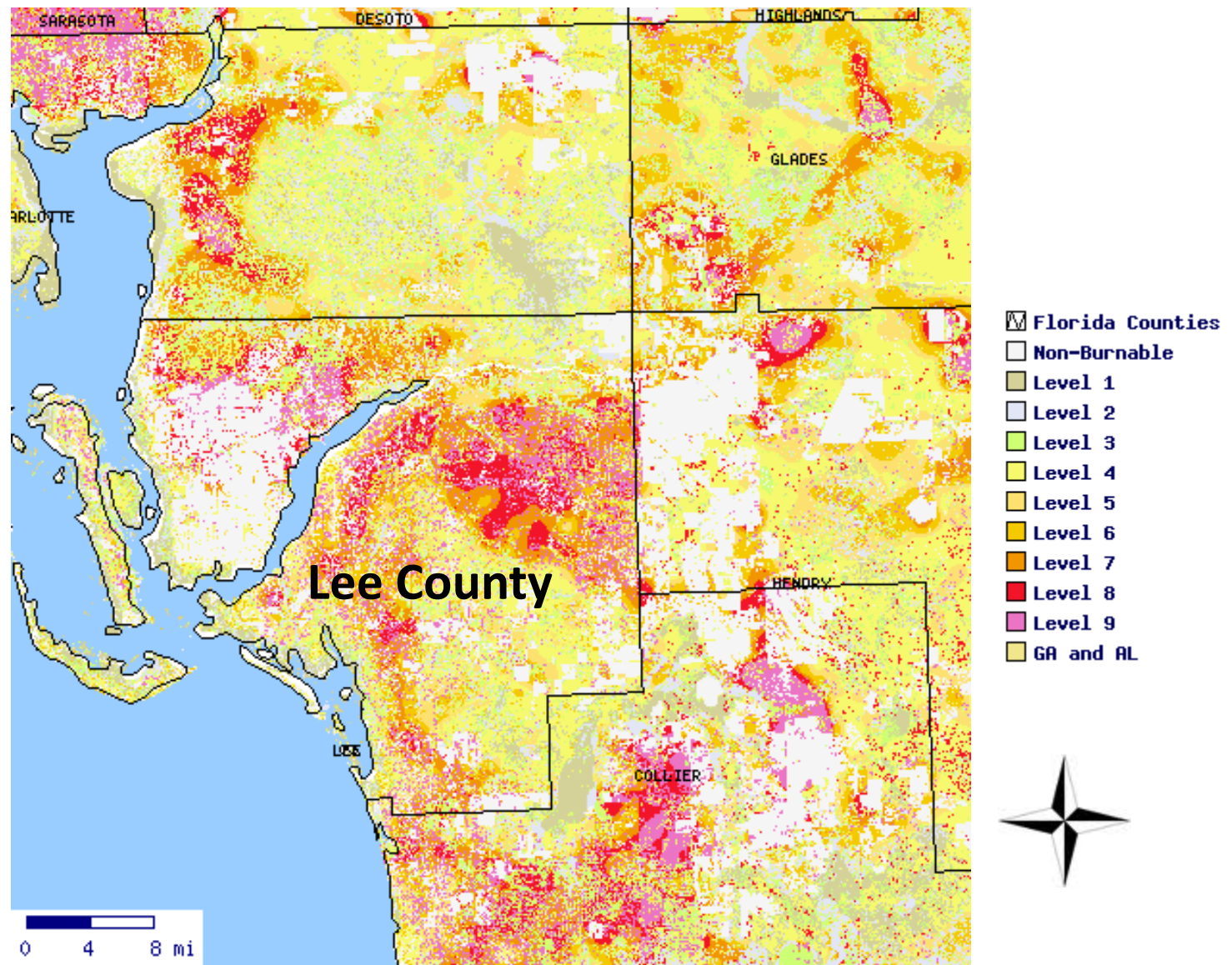
(U.S. Bureau of Labor Statistics, Nielsen Claritas)

Insurance fraud and arson on the rise in Lee County

“A mixed demographic translates to a mixed knowledge, understanding and desire to even learn about fire. A lot of low income so when you are working to keep your mortgage paid and food on the table, your ability to—in some cases a fire will do you a favor because you got out from underneath that house.”

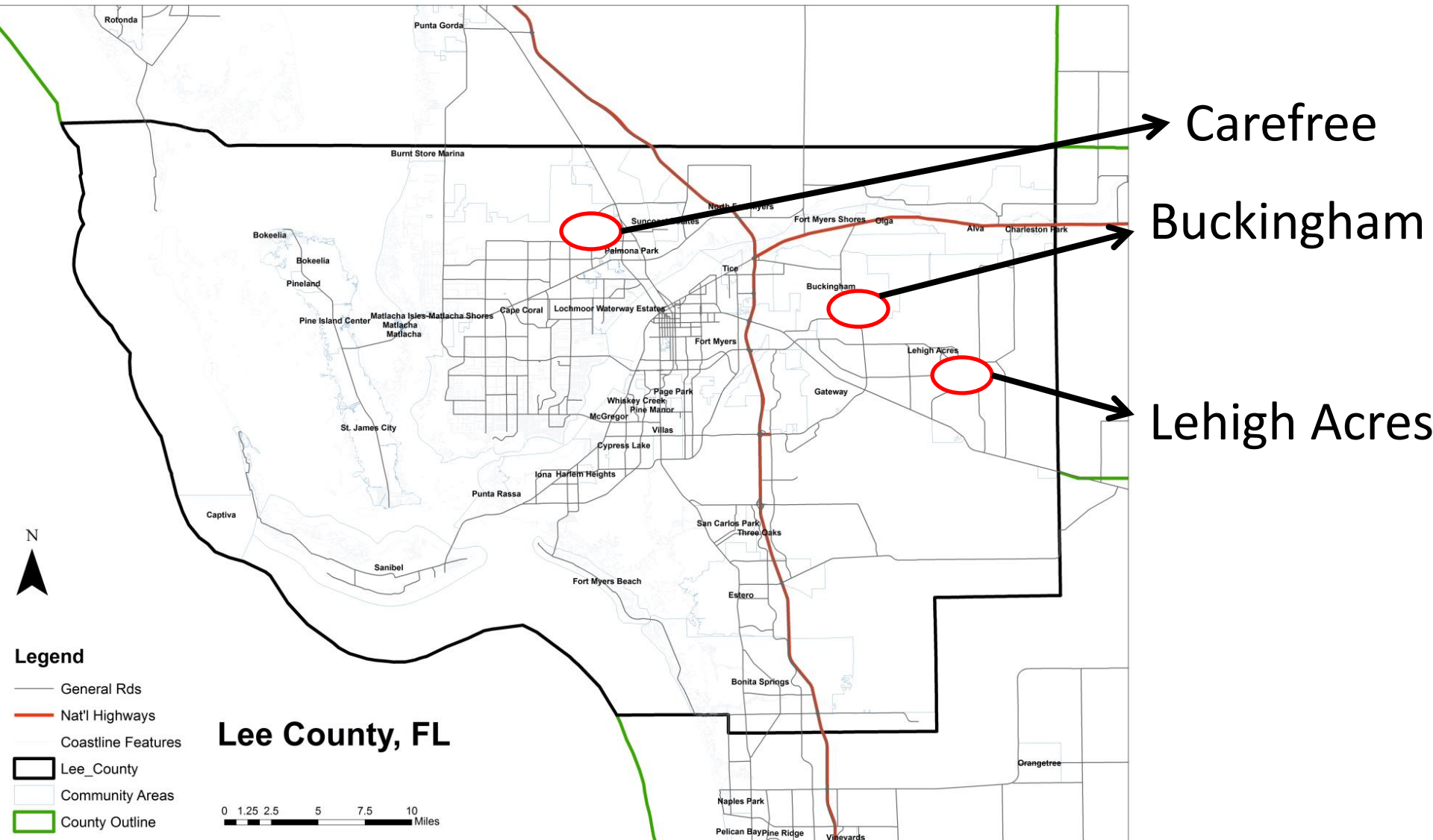


Lee County Wildland Fire Risk Assessment



Source: Florida Division of Forestry

Three Examples of Adaptive Capacity



Buckingham:

“families that go back generations”



“[Buckingham] is an historic agricultural community and they have a high source of pride. [They use] prescribed fire just for grazing pastures...they are more aware about wildfire because of adjacent Lehigh Acres—the wildfires out there. Then you have longer term families.”

Lehigh Acres



“the collapse of the economy pulled out people, money and motivation from the area.”

Lehigh Acres

“...fractured leadership without a common goal, they’re part of the county, which means they’re unincorporated so there’s really a lack of identity when comparing to right next door is Buckingham...It’s also hard to cobble together suitable neighborhood groups. Basically...your other neighbor may live in Germany. And even if you write the letter to them in German, they’re not necessarily going to write you back.”

Carefree:

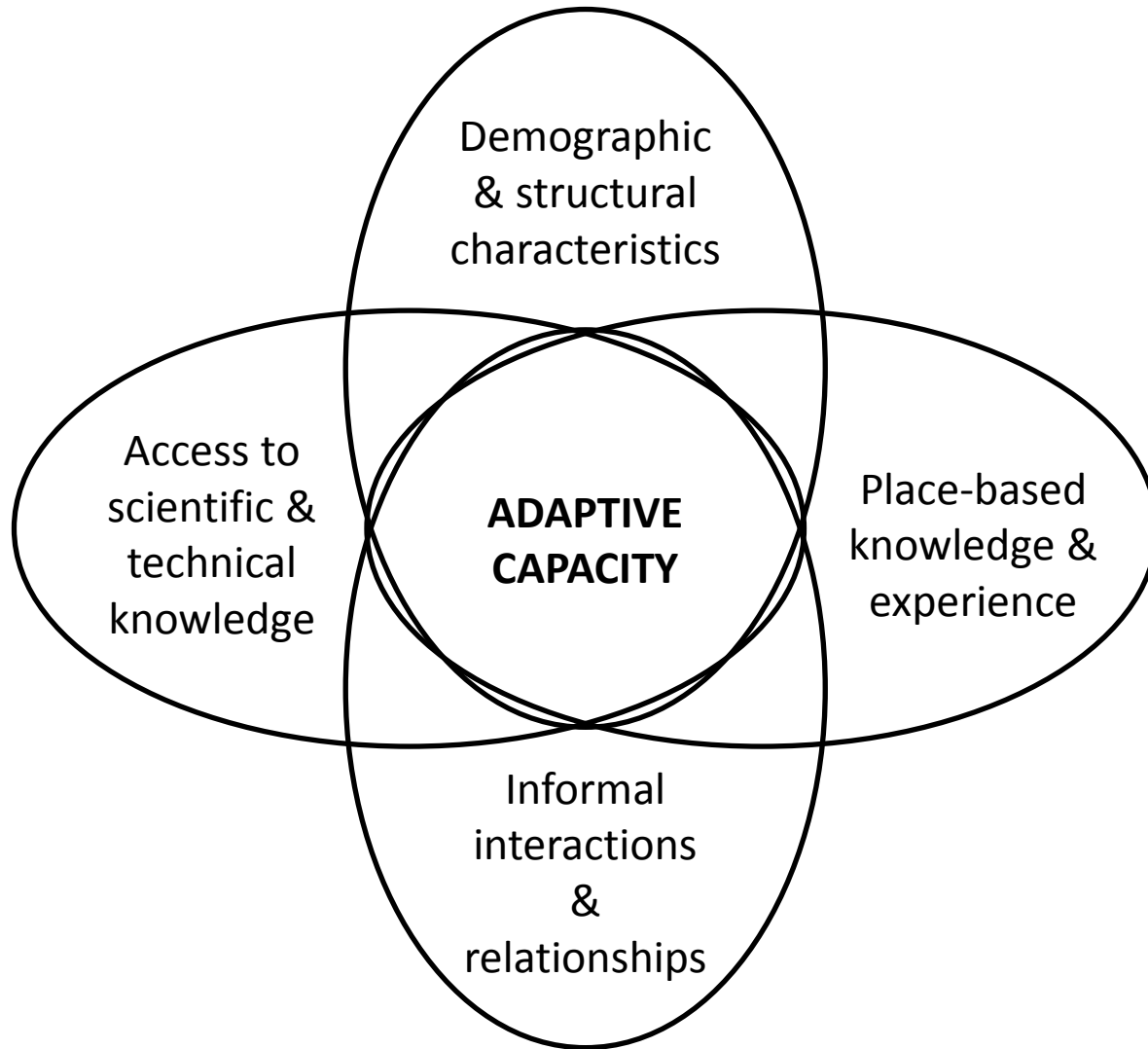
“there is a core group that is highly interested in doing the right thing environmentally”



Carefree Community leaders organized a prescribed burn in their conservation area:

“the [HOA’s] Grounds Committee...began [planting flowers before we started taking on the fire issue]...The leaders sought help...That’s how we ended up [working with the DOF]. And I also think that the community was a young community that was growing and all of the new people that were coming from up north were out of ‘it’s all new.’ And so they kind of accepted it as something they were learning about.”

Some pre-existing organizational forms better able to deal with fire



Local context is key to understanding adaptive capacity

- Census type data only part of the story
- Similar structural circumstances, but when you zoom in you see very different forms & degrees of adaptation
- Areas within Lee County organized differently = varying capacities to deal with fire risk
- Need to develop a bottom-up assessment